piled list of the plants he had for many years noted as growing on this island, either native, naturalized, or generally cultivated. On all his trips and excursions he was wont to gather whatever he thought would interest his associates of the Club. Of late years he has been unable to attend our meetings, but all the older members will affectionately cherish his memory.

§ 175. **Asplenium Filix-femina,** *Var.* **laciniatum,** Moore.*—In the BULLETIN for April, 1876, I mentioned receiving some sterile specimens of a fern that I thought I had succeeded in identifying as the above variety of the Lady-fern. The specimens were found by Miss Eliza Hosmer, in Monmouth Co., New Jersey. The next season, at my request, Mr. Guilford, of Red Bank, N. J., visited the locality and succeeded in finding two plants which he sent to me. These plants have been growing nearly two seasons between other forms of the same species, and I have just succeeded in securing a fertile frond by which I am able to confirm my previous judgment.

The plants are small and very peculiar in their appearance. The fronds are finely laciniate, and uniformly very irregular in outline. The pinnæ are extremely variable in length, some of them terminating abruptly, others being nearly one-sided—but all laciniate—as if from an injury. These peculiarities may be seen even in the young fronds when unrolling.

I am not inclined to recognize the so-called varieties of this protean species as we find them growing with us, but this form certainly has a better claim to be considered a variety than any with which I am acquainted. GEO. E. DAVENPORT.

BOSTON, Aug. 6, 1877.

§ 176. **Publications.**—1. *American Journal of Science and Arts*, July and August: Habenaria (Platanthera) rotundifolia, proves to be a true Orchis, having a pouch to the pollinia disks, and Pursh's name, O. rotundifolia, is the proper one. Has any one yet observed whether our H. viridis has its glands protected by pouches? Prof. Farlow gives interesting cryptogamic notes, particularly on Stahl's study of the Lichens. Dr. Gray has an interesting article on the extraordinary petioles of the cotyledons in *Megarrhiza Californica*, Torr. On germinating some fresh seeds, Dr. Gray found that the body of the seed in its shell was raised well out of the soil upon what seemed a well developed radicle, but the cotyledons never expanded. After the lapse of about a fortnight the plumule came separately out of the soil. The plumule had come forth from the base of what appeared to be an elongated radicle (of two or three inches in length), and below this the thickening of the root, which acquires enormous dimensions in old plants, had already commenced. A large amount of the nourishing matter stored in the cotyledons had been carried down to the root and used in its growth as well as in that of the plumule. The latter came from a cleft at the very base of the seeming radicle, which otherwise appeared to be solid. But on cutting it across toward the base it was found to be tubular, and when

* Described and figured in Moore's "Nature Printed Ferns," Vol II., p. 41, Pl. lix.–A; also in Lowe's "New and Rare Ferns," p. 130, Pl. lv.–B.

beginning to wither this stalk was separable from above downward into two. This, therefore, is a case in which long peticles to the cotyledons, of which there is no appearance in the seed, connate into one body, are developed and greatly lengthened in place of the radicle, which is thus simulated. Something similar occurs in Delphinium nudicaule, T. & G., Horse-chestnut, and Ipomœa leptophylla. Botanists on the Pacific coast are earnestly requested to examine the germination of all the species of Megarrhiza. Mature fruits and seeds of all the species are much desired. Athamanta Chinensis, L. (probably Conioselinum Canadense, T. & G.), would seem, from a letter of Muhlenberg's in the Collins' correspondence, to have possibly got its specific name from a misspelling or mistake of name of the original locality, Genessee. Linnæus says "Chinensem dixit Barthram." Was it Kalm who labelled his plants from Kentucky, *Gentogi?*—2. *The Botanical Gazette* is always full of good things. In the July No. we particularly note, Prof. Porter on variations in Podophyllum peltatum, L., Mr. Shriver on Nepeta Glechoma, Benth., and, in the August No., Dr. Engelmann on the varying periods of the opening of pine cones.—3. *The American Naturalist*, with the Botany under the conduct of Prof. Goodale, becomes of increasing interest. We are rather late in calling attention to Mr. Walson's request for a more careful examination of our species of Iris. Specimens of flowers, fruit, and roots, fresh or dried, from any part of the country, may be sent to the Botanic Garden, Cambridge.—4. *Field and Forest*, July, begins the Third Vol. with an interesting account of a botanical trip to the Dismal Swamp and parts adjacent.—5. *Psyche* to June has been received. This little periodical is indispensable to entomologists, and it is desirable that every botanist should be more or less an entomologist.—6. *Proceedings of the Acad. of Nat. Sciences of Philadelphia*, Jan. to March, 1877: Of much botanical interest is Mr. Isaac Burk's list of 125 plants, recently collected on ships' ballast in the neighborhood of Philadelphia.—7. *Descriptions of new species of plants, with revisions of Lychnis, Eriogonum, and Chorizanthe*, Contrib. to Am. Botany, No. VII., by Sereno Watson, Proceed. Am. Acad. Sci., Vol. XII., pp. 246–278: We notice an error in the imprint, 1876 for 1877. It seems that we have eleven American species of Lychnis. Dr. Allen found years since at the White Sulphur Springs of Virginia an Eriogonum, which notwithstanding its yellow flowers Dr. Torrey thought to be E. tomentosum. We think this was before he and Dr. Gray made their revision of that genus. At all events the northern locality does not seem to be recorded.—8. We are glad to notice that Mr. Cassino, of the Naturalists' Agency, proposes to publish *Illustrations of the Ferns of North America*, Text by Prof. Eaton, Illustrations by Jas. H. Emerton. The work will be issued in large quarto parts, at intervals of about three months, three colored plates to a part (chromo-lithography), at one dollar a part. With such an artist as Mr. Emerton, and such a master of pteridology as Prof. Eaton, and such able aids as Messrs. Davenport, Robinson, Faxon, and Mrs. Cooper, and with the Herbaria of Yale, Cambridge and Boston, nothing better could be desired. The paper is promised to be the best in

the market. The price is remarkably low.—9. *The Chautauqua Flora*, by Edward S. Burgess, Clinton, N. Y: This includes the cryptogams to the end of Hepaticæ. There are 37 lithographed pages, 880 species. Mr. Burgess deserves credit for his enterprise. We notice that he gives no Cistaceæ. We wish much that those who have knowledge of this order would help us in fixing the limits of the species on this side of the Rocky Mountains. Mr. Burgess reports a pink-white variety of Pontederia, found by Mr. Geo. Miner. There seem to be no Cassias in Chautauqua, 49 Carices, and 30 Ferns.—10. *Hay Fever or Pollen Poisoning:* In this essay, reprinted from the Transactions of the Medical Society of New Jersey, Newark, 1877, Dr. Elias J. Marsh, of Paterson, seeks to maintain, as others have done before, that the rose and hay fever, the former in early, the latter in late summer, are caused by pollen floating in the air; in particular the hay fever by the pollen of Ambrosia. It would seem likely enough that susceptible constitutions may be irritated by such agencies, especially as certain regions, sharply marked, are found to be free from the exciting cause, but more accurate observations are needed. We notice one or two botanical misprints. Ambrosia trifolia should be A. trifida. How did the Dr. recognize the pollen of Ambrosia in the air? It is apparently an anemophilous plant, and very probably the pollen is peculiar, and, if certainly identified, the observations would be interesting on that account.—11. *Science Observer*, No. 2, Boston, Mass., Boston Amateur Scientific Society, 4 pages monthly, 25 cents per annum. Solicits exchanges. The present No. is chiefly Astronomical and Mineralogical.

§ 177. **Pontederia cordata,** L.—On page 62 of this volume of the BULLETIN, I gave some observations on this plant, but working with dried specimens, I did not make out its character truly and supposed the lengthening of the style in the coiled up flowers to be a result of growth or tension. There is I believe such an extension, but not to the degree supposed.

This summer, I had the opportunity of seeing some growing plants, and find that Pontederia is as truly trimorphic as Lythrum Salicaria, or even more so. There are three kinds of flowers, not on the same but on different plants. Of these, one has the stigma raised on the style to the top of the flower, a second only to the middle of the flower or top of the tube, and the third with a very short style at the bottom of the tube. There are thus three positions for the stigma. Whenever the stigma is in one of these positions, the two other are occupied respectively by one of the two sets of anthers, three in a set. When the anthers occupy the highest position their pollen is, I judge about $1\frac{2}{3}$ thousandths of an inch in diameter. Anthers occupying the middle position have pollen rather smaller, say $1\frac{1}{3}$ thousandths of an inch in diameter. When at the bottom of the tube, the anthers have still smaller pollen, say 1 thousandth of an inch or less. The pollen in all positions seems to be perfect. It remains to be seen whether all forms ripen seed equally. The stigma of the tallest style is plainly cut into six linear segments. If there is any division of the other stigmas, it is not very manifest. The stamens of each set are not quite uniform in length, and in